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12218.1100

SERIAL NO.

09/02/883

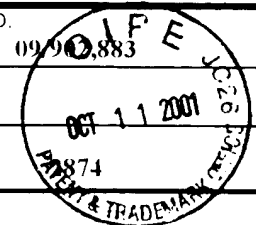
APPLICANT(S)

Ruan et al.

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July 11, 2001

GROUP



U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
SUS	4,570,139	02/11/86	Kroll	335	187	
SUS	5,475,353	12/12/95	Roshen, et al.	335	78	
SUS	6,094,116	7/25/00	Tai, et al.	335	78	
SUS	5,472,539	12/05/95	Saia, et al.	156	155	
SUS	5,818,316	10/06/98	Shen, et al.	335	78	
SUS	5,847,631	12/08/98	Taylor, et al.	335	78	
SUS	5,629,918	05/13/97	Ho, et al.	310	40 NM	
SUS	5,398,011	03/14/95	Kimura, et al.	335	79	
SUS	6,016,095	01/18/00	Qiu, et al.	336	175	
SUS	6,143,997	11/07/00	Feng, et al.	200	181	
SUS	6,124,650	09/26/00	Bishop, et al.	310	40 NM	

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
SUS	06251684 A	09/09/94	Japan				
SUS	0 780 858 A	06/25/97	EPO				
SUS	97 39468 A	10/23/97	PCT				
SUS	98 34269 A	08/06/98	PCT				
SUS	0 869 519 A	10/07/98	EPO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

SUS	William P. Taylor, Oliver Brand, Mark G. Allen, "Fully Integrated Magnetically Actuated Micromachined Relays", Journal of Microelectromechanical Systems, Vol. 7, No. 2, June 1998, pgs. 181-191
SUS	John A. Wright, Yu Chong Tai, and Shinh Chia Chang, "Large-Force, Fully-Integrated MEMS Magnetic Actuator," 1997 International Conference on Solid-State Sensors, and Actuators, Chicago, June 1997, pgs 793-796

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Sarah N. Song

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15 Dec 02

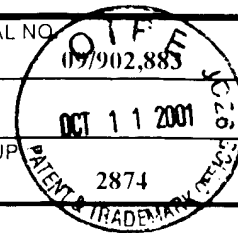
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GROUP PATENT 2874

[illegible][illegible]

828			Tilmans, et al., "A Fully-Packaged Electromagnetic Microrelay", IEEE 1999, pgs. 25-30
828			Xi-Qing Sun, K.R. Farmer, and W.N. Carr, "A Bistable Microrelay Based on Two-Segment Multimorph Catilever Actuators", 1998 IEEE, pgs. 154-159

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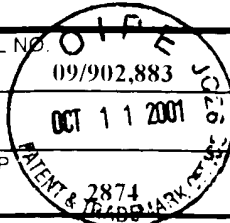
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U.S. PATENT DOCUMENTS

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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

816		Ezekiel J.J. Kruglick and Kristofer S.J. Pister, "Bistable MEMS Relays and Contact Characterization", Hilton Head 98 and 19th International Conference on Electric Contact Phenomena, 5 pgs.
820		Chong H. Ahn and Mark G. Allen, "A Fully Integrated Micromagnetic Actuator With a Multilevel Meander Magnetic Actuator With a Multilevel Meander Magnetic Core", June 1992, IEEE Solid-State Sensor and Actuator Workshop, pgs. 14-17

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Sarah Young

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5/1/02

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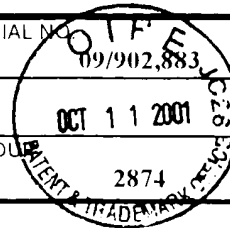
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U.S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

WCT		William P. Taylor and Mark G. Allen, "Integrated Magnetic Microrelays: Normal Open, Normal Closed, and Multi-Pole Devices", June 1997, IEEE International Conference on Solid-State Sensors and Actuators, pgs. 1149-1152
81-8		Jack W. Judy and Richard S. Muller, "Magnetically Actuated, Addressable Microstructures", September 1997, Journal of Microelectromechanical Systems, Vol. 6, No. 3, September 1997, pgs 249-255

EXAMINER

Lucy N. Long

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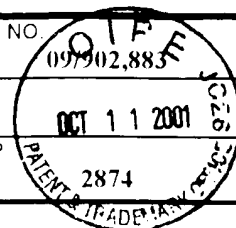
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July 11, 2001

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2874



U.S. PATENT DOCUMENTS

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						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

818		John A. Wright and Yu-Chong Tai, "Micro-Minature Electromagnetic Switches Fabricated Using MEMS Technology", 46th Annual International Relay Conference: NARM '98, April 1998
828		John A. Wright, Yu-Chong Tai and Gerald Lilienthal, "A Magnetostatic MEMS Switch for DC Brushless Motor Commutation", Solid State Source and Actuator Workshop 1998, June 1998

EXAMINER

Shuabing Song

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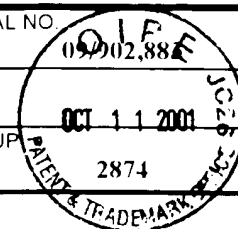
Ruan, et al.

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U.S. PATENT DOCUMENTS

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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

874		Laure K. Lagorce, Oliver Brand, and Mark G. Allen, "Magnetic Microactuators Based on Polymer Magnets", IEEE Journal of Microelectromechanical Systems, Vol. 8, No. 1, March 1999, pgs. 2-9
878		E. Fullin, J. Gobet, H.A.C. Tilmans, and J. Bergqvist, "A New Basic Technology for Magnetic Micro-Actuators", pgs. 143-147, undated

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Sarah H. Long

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15 Dec 01

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July 11, 2001

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sig		"P10D Electricity & Magnetism Lecture 14", Internet Source: http://scitec.uwichill.edu.bb/cmp/online/P10D/Lecture14/lect14.htm , 01/03/2000, pgs. 1-5
sig		Richard P. Feynman, "There's Plenty of Room at the Bottom", 12/29/59, pgs. 1-12, Internet Source: http://www.zyvex.com/nanotech/feynman.html

Sarah J. Song

15 Dec 02

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(Use several sheets if necessary)

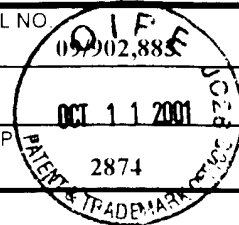
12218.1100

09/902,883

Ruan, et al.

July 11, 2001

2874

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Ans			William Trimmer, "The Scaling of Micromechanical Devices", Sensors and Actuators, Vol. 19, No. 3, September 1989, pgs. 267-287, taken from the Internet source: http://home.earthlink.net/~trimmerw/mems/scale.html

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Form PTO-A820
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	09.902.883
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Filing Date	July 11, 2001
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First Named Inventor	Meichun Ruan
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Art Unit	2874
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Examiner Name	S. Song
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Attorney Docket Number	12218.1100
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Sheet	1	of	2
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Examiner
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